MONTANA FISH, WILDLIFE & PARKS
FINAL PROJECT PERFORMANCE REPORT

GRANT TITLE: **Montana Prairie Riparian Native Species Study**
AGREEMENT: **T - 13 - 1**
PERIOD COVERED: **July 1, 2003 through June 30, 2006**

Objective

The objective of this project is to determine the presence and distribution of fish, amphibians, reptiles, birds, and mammals in randomly-selected prairie streams and associated riparian/grassland habitats in eastern Montana, as well as to determine spatial and temporal use of a subset of those streams to determine how fish species composition changes seasonally and as you move up a drainage away from the larger tributary/river systems.

Location

The study will occur in Northwest Great Plains and Northern Glaciated Plains ecotypes in the eastern two thirds of Montana, which encompass the Missouri and Yellowstone River basins in the state. Actual locations of the sample sites will be randomly selected.

Accomplishments: Please see attached report (CD provided)

We sampled for fish, amphibians, reptiles, birds, and small mammals at 104 sites on 104 different creeks. We also sampled 5 of these sites twice per year over 3 years, thus we sampled a total of 129 times. Two sites, Lodge Creek near Chinook and Canyon Creek near Billings were not sampled for fish because the water was too deep to wade.

Fish - The sampled creek had water present 101 times and was dry on 26 occasions. Of the 101 sampling events with water present, the water was flowing on 21 occasions, had continuous water on 12 occasions, and was interrupted pools on 68 occasions. Fish were present at 93 of the 101 sampling occasions with water present (92%). A total of 48,356 individual fishes of 32 taxa were captured. The majority of fish taxa and individuals captured were native to Montana. Twenty-three taxa and 43,942 individual fishes (91%) were native, and the remaining 8 species and 4,414 individual fishes were introduced species.

Amphibians and reptiles - A total of four amphibian species and eight reptile species were observed during reptile and amphibian surveys. Northern leopard frog (*Rana pipiens*) was the most commonly occurring species; they were present at 38 of 104 sites (36%). Painted turtle (*Chrysemys picta*) was present at 17 sites (16%) and plains gartersnake (*Thamnophis radix*) was present at 12 sites (12%). Woodhouse's toad (*Bufo woodhousii*) were present at eight sites (8%), and eastern racer (*Coluber constrictor*) were present at seven sites (7%). Boreal chorus frog (*Pseudacris maculata*), western rattlesnake (*Crotalus viridis*), gophersnake (*Pituophis catenifer*), Great Plains toad (*B. cognatus*), terrestrial gartersnake (*Thamnophis elegans*), tiger salamander (*Ambystoma tigrinum*), and common sagebrush lizard (*Sceloporus graciosus*) were each present at 3 or fewer sites (≤ 3%). An additional two species: snapping turtle (*Chelydra serpentina*), greater short-horned lizard (*Phrynosoma hernandesi*) were incidentally observed at sampling sites. Smooth greensnake (*Opheodrys vernalis*) was observed on Montana Highway 5 in Daniels County; this is the westernmost and highest elevational record for this species (Werner et al. 2004).

Birds -A total of 7,501 individual birds of 120 species was observed during point-count surveys. The most commonly observed species during point-counts was western meadowlark (*Sturnella neglecta*), which was present at 97% of point-counts. The six next most common species, respectively, were brown-headed cowbird (*Molothrus ater*), red-winged blackbird (*Agelaius phoeniceus*), mourning dove (*Zenaida macroura*), killdeer (*Charadrius vociferus*), eastern kingbird (*Tyrannus tyrannus*), and horned lark (*Eremophia alpestris*); each of these species was present at more than 50% of sites. We observed an additional 18 bird species through incidental observations in the vicinity of the sampling sites.

Mammals - A total of 1,178 individual mammals of 11 taxa was captured. The catch was dominated by *Peromyscus* sp.; 97% of the mammals captured were *Peromyscus* sp. The other species captured were meadow vole (*Microtus pennsylvanicus*), northern grasshopper mouse (*Onochomys leucogaster*), house mouse (*Mus musculus*), western harvest mouse (*Reithrodontomys megalotis*), prairie vole (*Microtus ochrogaster*), Ord's kangaroo rat (*Dipodomys ordii*), olive-backed pocket mouse (*Perognathus fasciatus*), long-tailed vole (*Microtus longicaudus*), Richardson's ground squirrel, and thirteen-lined ground squirrel (*Spermophilus tridecemlineatus*).

Variances None

Expenditure Recap

Proposed:

	Federal Share		Match		Total
Direct Costs	281,076.00		93,692.00		374,768.00
Indirect @ multiple rates	54,557.81		18,185.94		72,743.74
Total	$ 335,633.81	75.0%	$ 111,877.94	25.0%	$ 447,511.74

Actual:

	Federal Share		Match		Total
Direct Costs	283,995.28		111,877.94		395,873.22
Indirect (various rates)	51,638.52				51,638.52
Total	335,633.80	75.0%	111,877.94	25.0%	447,511.74

Budget Summary (federal direct costs):

	Expended
Contracted Services	283,995.28
TOTAL	$ 283,995.28

The non-federal share of funding was in the form of waived overhead by Montana State University (MSU), which was used to cover contractual expenses associated with completing this work. The actual work was done by Montana State University under contract with Fish, Wildlife and Parks. The value of the waived overhead at the approved rate ($116,633 @41.5%) exceeded the required minimum amount by $4,560.

Project Personnel

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